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| NEWS LOGIN | Welcome Banner and News Items |
| NEWS PHONE | Direct Dial and Telecommunication Network Access to STN |
| NEWS WWW | CAS World Wide Web Site (general information) |

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=> s (settachayanon, ?)/au or (schnoes, ?)/au
      0 (SETTACHAYANON, ?)/AU
      332 (SCHNOES, ?)/AU
L1      332 (SETTACHAYANON, ?)/AU OR (SCHNOES, ?)/AU

=> s (setthachayanon, ?)/au or (schnoes, ?)/au
      13 (SETTHACHAYANON, ?)/AU
      332 (SCHNOES, ?)/AU
L2      341 (SETTHACHAYANON, ?)/AU OR (SCHNOES, ?)/AU

=> s (isocyanate) or diisocyanate or urethane or polyurethane) and 12
1 IS NOT A RECOGNIZED COMMAND
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=> s (isocyanate or diisocyanate or urethane or polyurethane) and 12
    62004 ISOCYANATE
    21037 ISOCYANATES
    70187 ISOCYANATE
        (ISOCYANATE OR ISOCYANATES)
    45666 DIISOCYANATE
    10532 DIISOCYANATES
    49527 DIISOCYANATE
        (DIISOCYANATE OR DIISOCYANATES)
    112922 URETHANE
    5166 URETHANES
    114520 URETHANE
        (URETHANE OR URETHANES)
    114907 POLYURETHANE
    82962 POLYURETHANES
    137222 POLYURETHANE
        (POLYURETHANE OR POLYURETHANES)
L3      10 (ISOCYANATE OR DIISOCYANATE OR URETHANE OR POLYURETHANE) AND L2
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=> d all 1-10

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L3      ANSWER 1 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
AN      2003:1005091 CAPLUS
DN      140:10683
ED      Entered STN: 25 Dec 2003
TI      Optical article and process for forming article
IN      Dhar, Lisa; Hale, Arturo; Katz, Howard Edan; Schilling, Marcia Lea;
        ***Schnoes, Melinda Lamont***
PA      Inphase Technologies, USA
SO      U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S. Ser. No. 46,822.
        CODEN: USXXCO
DT      Patent
LA      English
IC      ICM G03H001-02
INCL    430001000; 430002000; 430290000; 430280100; 359003000
CC      74-9 (Radiation Chemistry, Photochemistry, and Photographic and Other
        Reprographic Processes)
        Section cross-reference(s): 35, 38
FAN.CNT 2
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| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------------------|------|----------|-----------------|----------|
| ----- | --- | ----- | ----- | ----- |
| PI US 2002142227 | A1 | 20021003 | US 2002-115392 | 20020403 |
| US 6939648 | B2 | 20050906 | | |
| PRAI US 1998-46822 | A2 | 19980324 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|------------------------------------|
| ----- | ----- | ----- |
| US 2002142227 | ICM | G03H001-02 |

INCL 430001000; 430002000; 430290000; 430280100; 359003000
US 2002142227 NCL 430/001.000
ECLA G03F007/00B3

- AB The optical article of the invention, e.g., holog. recording medium or polymeric waveguide, is formed by mixing a matrix precursor and a photoactive monomer, and curing the mixt. to form the matrix in situ. The reaction by which the matrix precursor is polymd. during the cure is independent from the reaction by which the photoactive monomer is polymd. during writing of data. In addn., the matrix polymer and the polymer resulting from polymn. of the photoactive monomer are compatible with each other. Use of a matrix precursor and photoactive monomer that polymerize by independent reactions substantially prevents cross-reaction between the photoactive monomer and the matrix precursor during the cure and inhibition of subsequent monomer polymn. Use of a matrix precursor and photoactive monomer that result in compatible polymers substantially avoids phase sepn. And in situ formation allows fabrication of articles with desirable thicknesses.
- ST holog optical information storage polymer matrix
- IT Polyoxyalkylenes, preparation
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(***diisocyanate*** terminated, polymer with dihydroxypolypropylene glycol and chlorophenyl acrylate, cured; holog. optical recording article and process for forming article)
- IT Holography
(holog. optical recording article and process for forming article)
- IT Polyoxyalkylenes, preparation
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymer with ***diisocyanate*** terminated polypropylene glycol and chlorophenyl acrylate, cured; holog. optical recording article and process for forming article)
- IT ***Polyurethanes***, preparation
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-, cross-linked; holog. optical recording article and process for forming article)
- IT Information systems
(storage; holog. optical recording article and process for forming article)
- IT 13633-87-9DP, 4-Chlorophenyl acrylate, polymer with ***diisocyanate*** terminated polypropylene glycol and dihydroxypolypropylene glycol, cured 25322-69-4DP, Polypropylene glycol, ***diisocyanate*** terminated, polymer with dihydroxypolypropylene glycol and chlorophenyl acrylate, cured 25322-69-4DP, Polypropylene glycol, polymer with ***diisocyanate*** terminated polypropylene glycol and chlorophenyl acrylate, cured 608525-53-7P, Pentaerythritol tetrakis(mercaptopropionate)-polypropylene glycol diglycidyl ether-styrene copolymer 608525-54-8P 608525-55-9P 608525-56-0P 608525-57-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(holog. optical recording article and process for forming article)
- IT 90-11-9, 1-Bromonaphthalene 90-14-2, 1-Iodonaphthalene 627-31-6, 1,3-Diodopropane 10075-72-6, 1-Methylthio naphthalene
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. or photoactive monomer for holog. optical recording article)
- IT 38066-89-6P 111220-26-9P 244301-23-3P 244301-24-4P 244301-25-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. or photoactive monomer for holog. optical recording article)

L3 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:972367 CAPLUS

DN 140:33675

ED Entered STN: 14 Dec 2003

TI Holographic data storage media comprising an aluminum salt compound and an asymmetric acrylate compound

IN ***Setthachayanon, Songvit*** ; Phan, Xuan T.; Michaels, Mark David; Ihas, Benjamin C.

PA Inphase Technologies, Inc., USA

SO PCT Int. Appl., 44 pp.

CODEN: PIXXD2

DT Patent
 LA English
 IC ICM G11C013-04
 ICS G03F007-004
 CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
 Section cross-reference(s): 38

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2003102959 | A1 | 20031211 | WO 2003-US17011 | 20030529 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | EP 1508144 | A1 | 20050223 | EP 2003-756276 | 20030529 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| PRAI | US 2002-383608P | P | 20020529 | | |
| | WO 2003-US17011 | W | 20030529 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|---|
| WO 2003102959 | ICM | G11C013-04 |
| | ICS | G03F007-004 |
| WO 2003102959 | ECLA | G03F007/00B3; G03F007/027; G11C013/04C8 |

OS MARPAT 140:33675

AB A novel photoimaging system for a two-chem. system contg. liq. photoreactive asym. acrylate compd. contg. sulfur, arom. moieties, and optionally bromine, and an aluminum salt compd. is disclosed. The photoimaging system has high dynamic range (M/#) and sensitivity and unexpectedly high temp. and high humidity resistance. The photoimaging system retains its dynamic range when exposed to 60.degree.C for 4 wk while a compn. without the aluminum salt compd. lost 75% of its dynamic range under similar exposure conditions. In one embodiment, 2-10 % of a thiobutylacrylate dissolved in a two-component ***urethane*** matrix contg. 0.002-1 % of the aluminum salt compd. showed a dynamic range of greater than 5 for a 200 .mu. thick sample and retained more than 80% of the dynamic range after 4 wk exposure at 60.degree.C.

ST holog data storage media aluminum salt compd asym acrylate

IT Holographic recording materials

Optical recording

(holog. data storage media comprising aluminum salt compd. and asym. acrylate compd.)

IT 91-60-1, 2-Naphthalenethiol 106-53-6, 4-Bromophenylthiol 814-68-6, Acryloyl chloride 865-47-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(holog. data storage media comprising aluminum salt compd. and asym. acrylate compd.)

IT 630131-13-4P 632331-78-3P

RL: RCT (Reactant); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(holog. data storage media comprising aluminum salt compd. and asym. acrylate compd.)

IT 630131-12-3P 632331-79-4P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(holog. data storage media comprising aluminum salt compd. and asym. acrylate compd.)

IT 52292-18-9, Baytec WE-180 116243-07-3, Desmodur N3200

RL: TEM (Technical or engineered material use); USES (Uses)

(holog. data storage media comprising aluminum salt compd. and asym. acrylate compd.)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Lee, C; US 5665791 A 1997 CAPLUS
 (2) Lucent Technologies Inc; EP 0938027 A 1999 CAPLUS
 (3) Mead Corp; EP 0435489 A 1991 CAPLUS

L3 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2003:950572 CAPLUS
 DN 140:21315
 ED Entered STN: 07 Dec 2003
 TI Novel exceptional high reflective index photoactive compound for optical applications
 IN ***Setthachayanon, Songvit*** ; Phan, Xuan T.; Michaels, Mark David; Ihas, Benjamin C.
 PA USA
 SO U.S. Pat. Appl. Publ., 12 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM G03H001-04
 ICS G11B007-24; G03F007-004; G03H001-10; C07C069-74; C07C319-00;
 C07C321-00; C07C323-00; C07C381-00
 INCL 430001000; 430002000; 430270140; 430280100; 430284100; 359010000;
 560001000; 568039000
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|---------------|------|---|-----------------|----------|
| PI | US 2003224250 | A1 | 20031204 | US 2003-446772 | 20030529 |
| | WO 2003102693 | A1 | 20031211 | WO 2003-US17010 | 20030529 |
| | | W: | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | |
| | | RW: | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | |

PRAI US 2002-383607P P 20020529

CLASS

| | PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|----|------------|-------|--|
| US | 2003224250 | ICM | G03H001-04 |
| | | ICS | G11B007-24; G03F007-004; G03H001-10; C07C069-74;
C07C319-00; C07C321-00; C07C323-00; C07C381-00 |
| | | INCL | 430001000; 430002000; 430270140; 430280100; 430284100;
359010000; 560001000; 568039000 |
| US | 2003224250 | NCL | 430/001.000 |
| | | ECLA | C08F020/38; G03F007/00B3; G03F007/027 |
| WO | 2003102693 | ECLA | C08F020/38; G03F007/00B3; G03F007/027 |

OS MARPAT 140:21315

AB A novel liq. photoreactive asym. acrylate compd. contg. sulfur, arom. moieties, and optionally bromine, and having high dynamic range sensitivity is disclosed. The acrylate compd. is a monomer for a photoimaging system. In one embodiment, when about 2-8% by wt. of the acrylate compd. is dissolved in a two-component ***urethane*** matrix system and incorporated in an optical article formed by reacting the two-component ***urethane*** matrix system, the optical article shows a sensitivity of about 4 or more and a shrinkage during the formation of the optical article of about 0.05% vs. a sensitivity of 2.26 and a shrinkage of 0.13% when tribromophenyl acrylate, a com. monomer, was used.

ST high reflective index photoactive compd holog optical recording

IT Polymerization
 (cationic; prepn. of novel exceptional high reflective index photoactive compd. for holog. recording)

IT Holography
 (novel exceptional high reflective index photoactive compd. for)

IT Optical recording materials
 (novel exceptional high reflective index photoactive compd. for holog. recording)

IT 630131-11-2P 630131-12-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
· (novel exceptional high reflective index photoactive compd. for holog. recording)

IT 91-60-1, 2-Naphthalenethiol 106-53-6, 4-Bromophenylthiol 865-47-4
19398-47-1, 1,4-Dibromo-2-butanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(prep. of novel exceptional high reflective index photoactive compd. for holog. recording)

IT 630131-13-4P 630131-14-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prep. of novel exceptional high reflective index photoactive compd. for holog. recording)

L3 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:133327 CAPLUS

DN 138:171420

ED Entered STN: 21 Feb 2003

TI Process and composition for rapid mass production of holographic recording article from ***polyurethane*** precursors

IN ***Setthachayanon, Songvit*** ; ***Schnoes, Melinda***

PA Inphase Technologies, Inc., USA

SO PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C08G018-10

ICS G11B007-26; G03H001-00

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 73

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2003014178 | A1 | 20030220 | WO 2002-US24926 | 20020807 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 2003044691 | A1 | 20030306 | US 2002-146115 | 20020516 |
| | US 6743552 | B2 | 20040601 | | |
| | EP 1414878 | A1 | 20040506 | EP 2002-756982 | 20020807 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| | JP 2004537620 | T2 | 20041216 | JP 2003-519124 | 20020807 |
| PRAI | US 2001-310225P | P | 20010807 | | |
| | US 2002-146115 | A | 20020516 | | |
| | WO 2002-US24926 | W | 20020807 | | |

CLASS

| | PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|--|---------------|-------|---|
| | WO 2003014178 | ICM | C08G018-10 |
| | | ICS | G11B007-26; G03H001-00 |
| | WO 2003014178 | ECLA | C08G018/10+18/48; G02B006/122C; G03H001/02; G11B007/0065; G11B007/26; G11C013/04C |
| | US 2003044691 | NCL | 430/001.000 |
| | | ECLA | C08G018/10+18/48; G02B006/122C; G03H001/02; G11B007/0065; G11B007/26; G11C013/04C |
| | EP 1414878 | ECLA | C08G018/10+18/48; G02B006/122C; G03H001/02; G11B007/0065; G11B007/26; G11C013/04C |
| | JP 2004537620 | FTERM | 2K008/AA04; 2K008/DD12; 2K008/DD13; 2K008/FF17; 4J034/DA01; 4J034/DG04; 4J034/DG06; 4J034/HA01; 4J034/HA07; 4J034/HB08; 4J034/HC03; 4J034/HC12; 4J034/HC34; 4J034/HC35; 4J034/HC64; 4J034/HC67; 4J034/HC71; 4J034/JA42; 4J034/MA12; 4J034/MA18; |

AB An optical article comprising a photoactive material and a polymer matrix is formed by a polymg. reaction of a material comprising component 1 and component 2, component 1 comprising a NCO-terminated pre-polymer and the component 2 comprising a polyol; wherein the material has an exotherm peak occurring within 12 min after mixing the component 1 and the component 2. Rapid mass prodn. of high performance holog. recording articles is described. To prep. a high performance holog. recording article based on two-component ***urethane*** matrix system, for example, polyols and all the additives must be virtually free of moisture contents. Deaeration must be carried out, once ***isocyanate*** and polyols including catalysts and all other ingredients are mixed together, to eliminate all entrapped air that is introduced into the mixt. during mixing. The deaeration takes time, and the ***urethane*** reaction must not be allowed to take place until all air bubbles are evacuated from the ***isocyanate*** -polyols mixt. The rapid mass prodn. of this invention overcomes such process limitations and results in a high-vol. prodn. of the high performance holog. recording articles.

ST ***polyurethane*** precursor holog recording material

IT Holographic recording materials

Optical materials

Optical waveguides

Polymerization

(process and compn. for rapid mass prodn. of holog. recording article from ***polyurethane*** precursors)

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(triols, ***polyurethanes*** ; process and compn. for rapid mass prodn. of holog. recording article from ***polyurethane*** precursors)

IT 9048-57-1DP, Baytec MP 160, ***polyurethanes*** with polyoxypropylene triols 25190-06-1DP, Polytetramethylene glycol, ***polyurethanes*** 52292-18-9DP, Baytec WE 180, ***polyurethanes*** with polyoxypropylene triols 116243-07-3DP, Desmodur N3200, ***polyurethanes*** with polyoxypropylene triols 151438-81-2P, Mondur TD 168256-05-1DP, Mondur ML, ***polyurethanes*** with polyoxypropylene triols

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (process and compn. for rapid mass prodn. of holog. recording article from ***polyurethane*** precursors)

IT 25322-69-4D, Polypropylene Oxide, triols, ***polyurethanes***

52794-68-0, Tribromophenylacrylate

RL: TEM (Technical or engineered material use); USES (Uses)

(process and compn. for rapid mass prodn. of holog. recording article from ***polyurethane*** precursors)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Canon; JP 02078033 A 1990 CAPLUS

(2) Dainippon Printing; JP 05323850 A 1993 CAPLUS

(3) Joseph; US 5959775 A 1999

L3 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:631477 CAPLUS

DN 131:250476

ED Entered STN: 06 Oct 1999

TI Optical article and process for forming article

IN Dhar, Lisa; Hale, Arturo; Katz, Howard Edan; Schilling, Marcia Lea; ***Schnoes, Melinda Lamont***

PA Lucent Technologies Inc., USA

SO Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G03F007-00

ICS G03H001-02; G03F007-20

CC 74-8 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 73

FAN.CNT 2

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--------------|------|----------|-----------------|----------|
| ----- | ---- | ----- | ----- | ----- |
| PI EP 945762 | A1 | 19990929 | EP 1999-302010 | 19990316 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO

JP 11352303 A2 19991224 JP 1999-79043 19990324
PRAI US 1998-46822 A 19980324
US 1998-208557 A 19981209

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

EP 945762 ICM G03F007-00
ICS G03H001-02; G03F007-20
EP 945762 ECLA G03F007/00B3

AB The optical article of the invention, e.g., a holog. recording medium or polymeric waveguide, is formed by mixing a matrix precursor and a photoactive monomer and curing the mixt. to form the matrix in situ. The reaction by which the matrix precursor is polymd. during the cure is independent from the reaction by which the photoactive monomer is polymd. during writing of data. In addn., the matrix polymer and the polymer resulting from polymn. of the photoactive monomer are compatible with each other. The use of a matrix precursor and a photoactive monomer that polymerize by independent reactions substantially prevents cross-reaction between the photoactive monomer and the matrix precursor during the cure and inhibition of subsequent monomer polymn. The use of a matrix precursor and a photoactive monomer that result in compatible polymers substantially avoids phase sepn. And in situ formation allows fabrication of articles with desirable thicknesses.

ST optical article independent matrix polymn monomer photopolymn; hologram independent matrix polymn monomer photopolymn

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(***diisocyanate*** -terminated; photopolymerizable compns. for holog. and optical article fabrication contg.)

IT Polyoxyalkylenes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(photopolymerizable compns. for holog. and optical article fabrication contg.)

IT Holography

(photopolymerizable compns. with polymerizable matrix precursors for)

IT Optical instruments

Optical waveguides
(photopolymerizable compns. with polymerizable matrix precursors for fabrication of)

IT Photoimaging materials

(photopolymerizable; with polymerizable matrix precursors for optical article fabrication)

IT 90-72-2 100-42-5, uses 2039-82-9, 4-Bromostyrene 6674-22-2
7575-23-7, Pentaerythritoltetrakis(mercaptopropionate) 13633-87-9,
4-Chlorophenyl acrylate 25322-69-4 25322-69-4D, Polypropylene glycol,
diisocyanate -terminated 26142-30-3, Polypropylene glycol
diglycidyl ether 125051-32-3

RL: TEM (Technical or engineered material use); USES (Uses)
(photopolymerizable compns. for holog. and optical article fabrication contg.)

IT 10075-72-6P, 1-Methylthionaphthalene 38066-89-6P 111220-26-9P

244301-25-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction in prep. photoactive monomer for photopolymerizable compns. for holog. and optical article fabrication)

IT 244301-23-3P 244301-24-4P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. and use as photoactive monomer for photopolymerizable compns. for holog. and optical article fabrication)

IT 90-11-9, 1-Bromonaphthalene 90-14-2, 1-Iodonaphthalene 624-92-0,

Dimethyl disulfide 627-31-6, 1,3-Diodopropane 1779-49-3,

Methyltriphenylphosphonium bromide

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction in prep. photoactive monomer for photopolymerizable compns. for holog. and optical article fabrication)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Du Pont; EP 0407773 A 1991

- (2) Essilor Int; FR 2667073 A 1992 CAPLUS
 (3) Lucent Technologies Inc; EP 0824222 A 1998 CAPLUS
 (4) Masami, K; US 5665494 A 1997 CAPLUS
 (5) Nihon Ita Glass Kk; JP 58163903 A 1983
 (6) Nihon Ita Glass Kk; JP 59071004 A 1984
 (7) Tateishi Denki Kk; JP 60072927 A 1985 CAPLUS

L3 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1997:603219 CAPLUS

DN 127:222000

ED Entered STN: 24 Sep 1997

TI ***Polyurethane*** (meth)acrylate, its manufacture, coating compositions, and wear layers for floor coverings

IN Rosenberry, Angela S.; Rupp, Claude R.; ***Setthachayanon, Songvit***

PA Armstrong World Industries Inc, USA

SO Brit. UK Pat. Appl., 34 pp.

CODEN: BAXXDU

DT Patent

LA English

IC ICM C08G018-67

ICS C09D175-16

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---------------------------|------|----------|-----------------|----------|
| PI | GB 2307912 | A1 | 19970611 | GB 1996-25099 | 19961203 |
| | GB 2307912 | B2 | 19991208 | | |
| | CA 2189836 | AA | 19970605 | CA 1996-2189836 | 19961107 |
| | CA 2189836 | C | 20040525 | | |
| | EP 783008 | A2 | 19970709 | EP 1996-118484 | 19961118 |
| | EP 783008 | A3 | 19980114 | | |
| | EP 783008 | B1 | 20040211 | | |
| | R: BE, DE, FR, LU, NL, SE | | | | |
| | US 5719227 | A | 19980217 | US 1997-853277 | 19970509 |
| | US 5843576 | A | 19981201 | US 1997-963176 | 19971103 |
| PRAI | US 1995-566545 | A | 19951204 | | |
| | US 1997-853277 | A3 | 19970509 | | |

CLASS

| | PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|--|------------|-------|---|
| | GB 2307912 | ICM | C08G018-67 |
| | | ICS | C09D175-16 |
| | GB 2307912 | ECLA | C08G018/67B4D; C08G018/67B4+18/42; C08G018/78B4F;
C08G018/78B4K; C08G018/79D4; C08G018/79K; C09D175/16 |
| | EP 783008 | ECLA | C08G018/67B4+18/42; C08G018/67B4D; C08G018/78B4F;
C08G018/78B4K; C08G018/79D4; C08G018/79K; C09D175/16 |
| | US 5719227 | NCL | 524/590.000; 522/012.000; 522/021.000; 522/090.000;
522/096.000; 525/455.000; 528/075.000 |
| | | ECLA | C08G018/67B4+18/42; C08G018/78B4F; C08G018/78B4K;
C08G018/79D4; C08G018/79K; C09D175/16 |
| | US 5843576 | NCL | 428/423.100; 522/012.000; 522/021.000; 522/090.000;
522/096.000; 524/590.000; 525/123.000; 525/455.000;
528/075.000 |
| | | ECLA | C08G018/67B4+18/42; C08G018/78B4F; C08G018/78B4K;
C08G018/79D4; C08G018/79K; C09D175/16 |

AB The multifunctional ***polyurethane*** (meth)acrylate oligomer is made by reacting a polyisocyanate with a functionality .gtoreq.3, a polyester polyol, and a hydroxyalkyl (meth)acrylate of mol. wt. .apprx.116-600. The coating compn. preferably includes a reactive (meth)acrylate diluent and a photoinitiator. Thus, a compn. contg. SR 351 diluent 16, SR 499 diluent 10, SR 502 10, Tone M 100 32.58, 1,6-hexanediol-glycerin-phthalic anhydride copolymer 8.87, and Desmodur N 3300 22.55 parts and photoinitiator was stable (70.degree. was stable >6 mo. as liq.) and was applied onto vinyl tile base and UV cured to give a coating having good stain resistance, gloss retention and scratch resistance.

ST ***polyurethane*** acrylate coating floor covering; polyester polyol ***urethane*** acrylate coating; hydroxyalkyl acrylate ***urethane*** coating; wear layer floor covering; isocyanurate trimer ***polyurethane*** acrylate coating; biuret ***isocyanate*** ***polyurethane*** acrylate coating; branched ***polyurethane*** acrylate coating

IT ***Polyurethanes*** , uses

Polyurethanes , uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(polyester-, acrylates; radiation curable coatings of superior gloss
retention, abrasion, and stain resistance for floor coverings)

IT Floor coverings
(radiation curable ***polyurethane*** acrylate coatings of superior
gloss retention, abrasion, and stain resistance for)

IT Coating materials
(radiation-curable; radiation curable ***polyurethane*** acrylate
coatings of superior gloss retention, abrasion, and stain resistance
for)

IT 5124-30-1DP, Methylene bis(4-cyclohexylisocyanate), isocyanurate derivs.,
polymer with reactive diluent, polyester polyol, and hydroxyacrylate
15625-89-5DP, SR 351, polymer with polyester polyol, hydroxyacrylate and
allophanate or isocyanurate 28961-43-5DP, Sartomer 499, polymer with
polyester polyol, hydroxyacrylate and allophanate or isocyanurate
75454-89-6DP, 1,6-Hexanediol-glycerin-phthalic anhydride copolymer,
polymer with reactive diluent and hydroxyacrylate and allophanate or
isocyanurate 101484-78-0DP, Tone M 100, polymer with reactive diluent
and polyester polyol and allophanate or isocyanurate 194798-53-3P
194798-54-4P 194798-55-5P 194798-56-6P 194798-57-7P 194798-58-8P
194798-59-9P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
engineered material use); PREP (Preparation); USES (Uses)
(radiation curable coatings of superior gloss retention, abrasion, and
stain resistance for floor coverings)

L3 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1996:535064 CAPLUS

DN 125:224751

ED Entered STN: 07 Sep 1996

TI (Meth) acrylated aromatic polyester floor covering wear layer

IN Ehrhart, Wendell A.; ***Setthachayanon, Songvit***

PA Armstrong World Industries, Inc., USA

SO U.S., 6 pp., Cont. of U.S. Ser. No. 223, 760, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08L067-07

INCL 428482000

CC 42-11 (Coatings, Inks, and Related Products)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | US 5543232 | A | 19960806 | US 1995-418873 | 19950406 |
| | US 5663003 | A | 19970902 | US 1996-644207 | 19960510 |
| | US 5891582 | A | 19990406 | US 1997-885503 | 19970630 |
| PRAI | US 1994-223760 | B1 | 19940406 | | |
| | US 1995-418873 | A1 | 19950406 | | |
| | US 1996-644207 | A1 | 19960510 | | |

CLASS

| | PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|--|------------|-------|--|
| | US 5543232 | ICM | C08L067-07 |
| | | INCL | 428482000 |
| | US 5543232 | NCL | 428/482.000; 525/033.000; 525/170.000 |
| | | ECLA | C09D167/07; E04F015/12 |
| | US 5663003 | NCL | 428/482.000; 525/010.000; 525/033.000; 525/035.000;
525/170.000 |
| | | ECLA | C09D167/07; E04F015/12 |
| | US 5891582 | NCL | 428/482.000; 525/010.000; 525/033.000; 525/035.000;
525/170.000 |
| | | ECLA | C09D167/07; E04F015/12 |

AB Title resin compn. comprises an acrylated polyester, the polyester being
the reaction product of an equiv. excess of diol, e.g. 1,6-hexanediol and
an arom. polycarboxylic acid or anhydride, preferably trimellitic
anhydride, and includes a highly ethoxylated triacrylate (for enhanced
flexibility and gloss retention). These coatings have good gloss
retention and better resistance to household and other stains than com.

urethane /acrylate floor coverings. PVC panels were coated with a
compr. contg. 1,4-cyclohexanedicarboxylic acid-1,6-hexanediol-trimellitic

anhydride polyester acrylate (hydroxy no. 48.1) 70, SR 9035 30, methyldiethanolamine 0.23, benzophenone 3.0, 1-hydroxycyclohexylphenylketone 1.0 g, and DC-193 surfactant and were cured in 2 passes under N at 0.35 J/pass, using 200 W/in Hg vapor lamps to give films having 24 h household stain test (sum of ΔE) 75 and 90 min modified Taber abrasion test value (gloss retention) 93%.

ST clear coat no wax resilient floor; polyester acrylate clear wear layer floor; hexanediol polyester acrylate wear layer floor; trimellitic polyester acrylate wear layer floor; stain resistant polyester coating floor; photocurable polyester acrylate clear coating

IT Floors
(wear layer for; (Meth) acrylated arom. polyester floor covering resin compn. having both good stain resistance and gloss retention)

IT Polyesters, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylate-terminated, (Meth) acrylated arom. polyester floor covering resin compn. having both good stain resistance and gloss retention)

IT Coating materials
(glossy, stain-resistant; (Meth) acrylated arom. polyester floor covering resin compn. having both good stain resistance and gloss retention)

IT 181782-63-8P 181782-64-9P 181782-65-0P 181782-66-1P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) ((Meth) acrylated arom. polyester floor covering resin compn. having both good stain resistance and gloss retention)

IT 98125-30-5P, 1,6-Hexanediol-Trimellitic anhydride copolymer
126982-13-6P, 1,6-Hexanediol-Trimesic acid copolymer 181517-79-3P
181517-81-7P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
((Meth) acrylated arom. polyester floor covering resin compn. having both good stain resistance and gloss retention)

IT 181782-67-2P 181782-68-3P 181782-69-4P 181782-70-7P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(coating having both good stain resistance and gloss retention)

IT 9002-86-2, PVC
RL: MSC (Miscellaneous)
(floor tile; (Meth) acrylated arom. polyester floor covering resin compn. having both good stain resistance and gloss retention)

L3 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1992:540661 CAPLUS

DN 117:140661

ED Entered STN: 04 Oct 1992

TI UV-sensitive photoimaging composition for solder mask formation

IN ***Setthachayanon, Songvit***

PA Armstrong World Industries, Inc., USA

SO U.S., 11 pp. Cont.-in-part of U.S. Ser. No. 256,638.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03F007-028

ICS G03F007-033

INCL 430284000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | US 5089376 | A | 19920218 | US 1989-365328 | 19890613 |
| | US 5102774 | A | 19920407 | US 1988-256638 | 19881012 |
| PRAI | US 1986-939604 | B2 | 19861208 | | |
| | US 1987-45464 | B1 | 19870504 | | |
| | US 1988-256638 | A2 | 19881012 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|------------|-------|------------------------------------|
| US 5089376 | ICM | G03F007-028 |
| | ICS | G03F007-033 |

US 5089376 INCL 430284000
 NCL 430/284.100; 430/910.000; 522/092.000; 522/095.000;
 522/096.000; 522/097.000
 US 5102774 NCL 430/284.100; 522/097.000
 AB A UV-sensitive photoimaging compn. for forming a solder mask comprises a polymer prep'd. by condensation reaction of a ***diisocyanate***, a hydroxyalkyl (di or tri) (meth)acrylate, and a carboxylic acid polyol, a binder resin, and a crosslinking agent, wherein the carboxylic acid polyol has the formula $(OH)xZCO_2H$ where x = an integer of 2-5; Z = a linear or branched, satd., unsatd., or arom. hydrocarbon moiety having 2-29 C atoms and a polyol and/or a dicarboxylic acid polyol can also be used as a reactant in the prepn. of the polymer.
 ST solder mask UV photoimaging compn; ***diisocyanate*** polymer
 photosensitive solder mask
 IT ***Urethane*** polymers, compounds
 RL: USES (Uses)
 (acrylates, carboxylated, UV-sensitive photopolymerizable compns.
 contg., for solder mask formation)
 IT Photoimaging compositions and processes
 (photopolymerizable, UV-sensitive, contg. carboxylated ***urethane***
 acrylates for solder mask formation)
 IT 4986-89-4, Pentaerythritol tetraacrylate 9011-13-6, Maleic
 anhydride-styrene copolymer 10287-53-3, Ethyl p-dimethylaminobenzoate
 15625-89-5 24650-42-8, 2,2-Dimethoxy-2-phenylacetophenone 75081-21-9,
 Isopropylthioxanthone 129406-62-8, Novacure 3800
 RL: USES (Uses)
 (UV-sensitive photopolymerizable compns. contg. carboxylated
 urethane acrylates and, for solder mask formation)
 IT 82400-41-7 118244-07-8 143385-43-7 143385-44-8 143385-45-9
 143480-21-1
 RL: USES (Uses)
 (UV-sensitive photopolymerizable compns. contg. for solder mask
 formation)

L3 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1989:25483 CAPLUS
 DN 110:25483
 ED Entered STN: 21 Jan 1989
 TI Photocurable ***urethane*** (meth)acrylate solder resists
 IN ***Setthachayanon, Songvit***
 PA Armstrong World Industries, Inc., USA
 SO Ger. Offen., 13 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C08G018-34
 ICS C08L075-04; C09D003-72; C09D003-80; G03F007-10; H05K003-34
 ICA C08J003-28; C09D003-74; C09D007-00; H05K003-28
 ICI C08J003-24, C08L075-04
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 74, 76

FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | DE 3741385 | A1 | 19880609 | DE 1987-3741385 | 19871207 |
| | DE 3741385 | C2 | 19960605 | | |
| | CA 1332093 | A1 | 19940920 | CA 1987-550900 | 19871103 |
| | NL 8702942 | A | 19880701 | NL 1987-2942 | 19871207 |
| | NL 190785 | B | 19940316 | | |
| | NL 190785 | C | 19940816 | | |
| | FR 2607820 | A1 | 19880610 | FR 1987-17087 | 19871208 |
| | FR 2607820 | B1 | 19940610 | | |
| | CN 87107321 | A | 19880622 | CN 1987-107321 | 19871208 |
| | CN 1031227 | B | 19960306 | | |
| | JP 63156870 | A2 | 19880629 | JP 1987-308828 | 19871208 |
| | JP 01041185 | B4 | 19890904 | | |
| | GB 2199335 | A1 | 19880706 | GB 1987-28631 | 19871208 |
| | GB 2199335 | B2 | 19910109 | | |
| | BR 8706609 | A | 19880719 | BR 1987-6609 | 19871208 |
| | CH 680622 | A | 19920930 | CH 1987-4773 | 19871208 |
| PRAI | US 1986-939604 | A | 19861208 | | |
| | US 1987-45464 | A | 19870504 | | |

| CLASS | PATENT N°. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|--------------|--|--|---|
| | DE 3741385 | ICM | C08G018-34 |
| | | ICS | C08L075-04; C09D003-72; C09D003-80; G03F007-10;
H05K003-34 |
| | | ICA | C08J003-28; C09D003-74; C09D007-00; H05K003-28 |
| | | ICI | C08J003-24; C08L075-04 |
| | DE 3741385 | ECLA | C08F299/06; C08G018/34H; C08G018/67B4+18/08B6C;
C08G018/67B4D; G03F007/035 |
| ' FR 2607820 | | ECLA | C08F299/06; C08G018/34H; C08G018/67B4+18/08B6C;
C08G018/67B4D; G03F007/035 |
| AB | The title resists, resistant to org. solvents but removable by alkalies, contain polymers prep'd. from ***diisocyanates*** 30-80, carboxylic acids bearing 2-5 OH groups 5-45, and hydroxyalkyl di- or tri(meth)acrylates 5-50%. A ***polyurethane*** acrylate was prep'd. from 1,6-hexanediol 4, dimethylolpropionic acid 4, 2-hydroxyethyl acrylate 8.2, and trimethylhexamethylene ***diisocyanate*** 16 equiv in 784 g N-methylpyrrolidone (I) and mixed (77.5 g) with maleic anhydride-styrene copolymer iso-Bu ester 82.0, trimethylolpropane triacrylate 47.8, isopropylthioxanthone 6.5, p-Me2NC6H4CO2Et 8.4, antifoam 6.5, phenothiazine 0.004, green dye 9.0, and I 91.25 g. This compn. was coated on a Cu-plated epoxy resin board, dried, cured through a neg. by UV, developed with 1% aq. K2CO3, cured, and post-cured to give a CH ₂ Cl ₂ -resistant mask resisting molten solder (260-275.degree.). | | |
| ST | solder resist photocurable; ***polyurethane*** acrylate solder resist; crosslinking agent solder resist; trimethylolpropane acrylate crosslinker; developer alkali solder resist | | |
| IT | ***Urethane*** polymers, uses and miscellaneous | | |
| | RL: USES (Uses) | (acrylate-terminated, solder resists, photocurable and alkali-removable) | |
| IT | Resists
(photo-, solder, ***polyurethane*** acrylates as) | | |
| IT | Soldering
(resists, photocurable ***polyurethane*** acrylates, alkali-removable) | | |
| IT | 58206-31-8 | | |
| | RL: USES (Uses) | (binders, Scriptset 550, for photocurable solder resists) | |
| IT | 15625-89-5, Trimethylolpropane triacrylate | | |
| | RL: MOA (Modifier or additive use); USES (Uses) | (crosslinking agents, for ***polyurethane*** acrylate solder resists, photocurable and alkali-removable) | |
| IT | 4098-71-9D, polymers with polycaprolactone triol, dimethylolpropionic acid and trimethylolpropane triacrylate 4767-03-7D, polymers with IPDI, polycaprolactone triol and trimethylolpropane triacrylate 24980-41-4D, Caprolactone polymer, triol derivs., polymers with IPDI, dimethylolpropionic acid, and trimethylolpropane triacrylate 25248-42-4D, Polycaprolactone, SRU, triol derivs., polymers with IPDI, dimethylolpropionic acid, and trimethylolpropane triacrylate 118139-86-9 118244-07-8 | | |
| | RL: USES (Uses) | (solder resists, photocurable and alkali-removable) | |
| L3 | ANSWER 10 OF 10 CAPLUS COPYRIGHT 2005 ACS on STN | | |
| AN | 1987:534813 CAPLUS | | |
| DN | 107:134813 | | |
| ED | Entered STN: 17 Oct 1987 | | |
| TI | Bicyclic acrylic monomers | | |
| IN | Herweh, John Edward; Echterling, Garry Kent; ***Setthachayanon,***
*** Songvit*** | | |
| PA | Armstrong World Industries, Inc., USA | | |
| SO | Ger. Offen., 7 pp.
CODEN: GWXXBX | | |
| DT | Patent | | |
| LA | German | | |
| IC | ICM C07D493-08
ICS C08F020-36; C08G065-22; G03F007-10 | | |
| ICA | C08J003-28; C08J003-24 | | |
| ICI | C08G065-22, C08L071-00 | | |
| CC | 35-2 (Chemistry of Synthetic High Polymers) | | |

Section cross-reference(s): 28

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | DE 3637467 | A1 | 19870507 | DE 1986-3637467 | 19861104 |
| | US 4672098 | A | 19870609 | US 1986-912538 | 19861001 |
| | CA 1256445 | A1 | 19890627 | CA 1986-520782 | 19861017 |
| | NL 8602723 | A | 19870601 | NL 1986-2723 | 19861029 |
| | NL 185922 | B | 19900316 | | |
| | NL 185922 | C | 19900816 | | |
| | AU 8664651 | A1 | 19870514 | AU 1986-64651 | 19861103 |
| | AU 586046 | B2 | 19890629 | | |
| | BE 905691 | A1 | 19870504 | BE 1986-217359 | 19861104 |
| | FR 2589471 | A1 | 19870507 | FR 1986-15359 | 19861104 |
| | FR 2589471 | B1 | 19900302 | | |
| | DE 3644981 | C2 | 19900419 | DE 1986-3644981 | 19861104 |
| | GB 2182661 | A1 | 19870520 | GB 1986-26579 | 19861106 |
| | GB 2182661 | B2 | 19891122 | | |
| | JP 62142182 | A2 | 19870625 | JP 1986-262916 | 19861106 |
| PRAI | US 1985-795523 | A | 19851106 | | |
| | US 1986-912538 | A | 19861001 | | |

CLASS

PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES

| | | |
|------------|-----|---------------------------------------|
| DE 3637467 | ICM | C07D493-08 |
| | ICS | C08F020-36; C08G065-22; G03F007-10 |
| | ICA | C08J003-28; C08J003-24 |
| | ICI | C08G065-22, C08L071-00 |
| US 4672098 | NCL | 526/268.000; 522/169.000; 549/363.000 |

GI

/ Structure 1 in file .gra /

AB The ***urethanes*** I (R1 = alkyl, aryl; R2 = H, Me; Z1 = hydrocarbylene; Z2 = alkylene; x = 0 or 1) are useful in the manuf. of (co)polymers. Adding 128.4 g 2-isocyanatoethyl methacrylate over 50 min to 144.2 g 1-ethyl-2,6,7-trioxabicyclo[2.2.2]octane-4-methanol and 1.4 g triethylenediamine in C6H6, adding 0.1 g hydroquinone, and heating 4 h at 45-55.degree. gave 262.3 g ***urethane***. AIBN-initiated photopolymn. of an 8.6% C6H6 soln. of this ***urethane*** gave a polymer (via the double bond only) with mol. wt. 50,532 (161,196 cor.) and glass temp. 84-99.degree..

ST trioxatricyclooctanemethanol ***urethane*** methacrylate; ortho ester ***urethane*** methacrylate; isocyanatoethyl methacrylate reaction alc

IT 110259-22-8P 110259-23-9P 110415-25-3P
RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation) (manuf. and properties of)

IT 110259-21-7P 110306-19-9P 110321-56-7P

RL: PREP (Preparation)
(prepn. of)

IT 26471-62-5, TDI

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et trioxabicyclooctanemethanol and hydroxyethyl acrylate)

IT 4098-71-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et trioxabicyclooctanemethanol and hydroxyethyl acrylate s)

IT 30674-80-7, Isocyanatoethylmethacrylate

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with Et trioxabicyclooctanemethanol)

IT 818-61-1

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ***diisocyanates*** and Et trioxabicyclooctanemethanol e)

IT 74358-92-2

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with isocyanatoethyl methacrylate)

=> d his

,(FILE 'HOME' ENTERED AT 08:21:50 ON 20 SEP 2005)

FILE 'CAPLUS' ENTERED AT 08:21:55 ON 20 SEP 2005

L1 332 S (SETTACHAYANON, ?)/AU OR (SCHNOES, ?)/AU
L2 341 S (SETTHACHAYANON, ?)/AU OR (SCHNOES, ?)/AU
L3 10 S (ISOCYANATE OR DIISOCYANATE OR URETHANE OR POLYURETHANE) AND

=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
|----------------------|------------------|---------------|

| | | |
|---------------------|-------|-------|
| FULL ESTIMATED COST | 46.62 | 46.83 |
|---------------------|-------|-------|

| DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) | SINCE FILE ENTRY | TOTAL SESSION |
|--|------------------|---------------|
|--|------------------|---------------|

| | | |
|---------------------|-------|-------|
| CA SUBSCRIBER PRICE | -7.30 | -7.30 |
|---------------------|-------|-------|

STN INTERNATIONAL LOGOFF AT 08:24:01 ON 20 SEP 2005